



SEQUENCE LISTING

<110> Van Snick, Jacques
Lethe, Bernard
Chaux, Pascal
Boon-Falleur, Thierry
van der Bruggen, Pierre

<120> MAGE-A1 PEPTIDES PRESENTED BY HLA CLASS
II MOLECULES

<130> L0461/7063

<160> 73

<170> FastSEQ for Windows Version 3.0

<210> 1
<211> 1624
<212> DNA
<213> Homo sapiens

<400> 1
gttttcaggg gacaggccaa cccagaggac aggattccct ggaggccaca gaggagcacc 60
aaggagaaga tctgcctgtg ggtcttcatt gccagctcc tgccacact cctgcctgct 120
gccctgacga gagtcatcat gtctcttgag cagaggagtc tgcactgcaa gcctgaggaa 180
gcccttgagg cccaacaaga ggccctgggc ctggtgtgtg tgcaggctgc cacctcctcc 240
tcctctcctc tggctcctggg caccctggag gaggtgccca ctgctgggtc aacagatcct 300
cccagagtc ctcagggagc ctccgccttt cccactacca tcaactcac tcgacagagg 360
caaccacgtg aggggtccag cagccgtgaa gaggaggggc caagcacctc ttgtatcctg 420
gagtccttgt tccgagcagt aatcactaag aagggtggctg atttggttg tttctgctc 480
ctcaaatatc gagccaggga gccagtcaca aaggcagaaa tgctggagag tgtcatcaaa 540
aattacaagc actgttttcc tgagatcttc ggcaaagcct ctgagtcctt gcagctggtc 600
tttggcattg acgtgaagga agcagacccc accggccact cctatgtcct tgtcacctgc 660
ctaggtctct cctatgatgg cctgctgggt gataatcaga tcatgccaa gacaggcttc 720
ctgataattg tcctggtcac gattgcaatg gagggcgcc atgctcctga ggaggaaatc 780
tgaggaggagc tgagtgtgat ggaggtgtat gatgggaggg agcacagtgc ctatggggag 840
cccaggaagc tgctcaccca agatttggtg caggaaaagt acctggagta ccggcagggtg 900
ccggacagtg atcccgcacg ctatgagttc ctgtgggggc caagggccct cgctgaaacc 960
agctatgtga aagtccttga gtatgtgac aaggtcagt caagagttcg cttttcttc 1020
ccatccctgc gtgaagcagc tttgagagag gaggaagagg gagtctgagc atgagttgca 1080
gccaaggcca gtgggagggg gactgggcca gtgcaccttc cagggccgcg tccagcagct 1140

```

ccccctgcct cgtgtgacat gaggccatt cttcactctg aagagagcgg tcagtgttct 1200
cagtagtagg tttctgttct attgggtgac ttggagattt atctttgttc tcttttgaa 1260
ttgttcaaat gttttttttt aagggatggt tgaatgaact tcagcatcca agtttatgaa 1320
tgacagcagt cacacagttc tgtgtatata gttaaagggt aagagtcttg tgttttattc 1380
agattgggaa atccattcta ttttgtgaat tgggataata acagcagtgg aataagtact 1440
tagaaatgtg aaaaatgagc agtaaaatag atgagataaa gaactaaaga aattaagaga 1500
tagtcaattc ttgccttata cctcagtcta ttctgtaaaa tttttaaaga tatatgcata 1560
cctggatttc cttggcttct ttgagaatgt aagagaaatt aaatctgaat aaagaattct 1620
tcct 1624

```

```

<210> 2
<211> 309
<212> PRT
<213> Homo sapiens

```

```

<400> 2
Met Ser Leu Glu Gln Arg Ser Leu His Cys Lys Pro Glu Glu Ala Leu
1      5      10      15
Glu Ala Gln Gln Glu Ala Leu Gly Leu Val Cys Val Gln Ala Ala Thr
20      25      30
Ser Ser Ser Ser Pro Leu Val Leu Gly Thr Leu Glu Glu Val Pro Thr
35      40      45
Ala Gly Ser Thr Asp Pro Pro Gln Ser Pro Gln Gly Ala Ser Ala Phe
50      55      60
Pro Thr Thr Ile Asn Phe Thr Arg Gln Arg Gln Pro Ser Glu Gly Ser
65      70      75      80
Ser Ser Arg Glu Glu Gly Pro Ser Thr Ser Cys Ile Leu Glu Ser
85      90      95
Leu Phe Arg Ala Val Ile Thr Lys Lys Val Ala Asp Leu Val Gly Phe
100     105     110
Leu Leu Leu Lys Tyr Arg Ala Arg Glu Pro Val Thr Lys Ala Glu Met
115     120     125
Leu Glu Ser Val Ile Lys Asn Tyr Lys His Cys Phe Pro Glu Ile Phe
130     135     140
Gly Lys Ala Ser Glu Ser Leu Gln Leu Val Phe Gly Ile Asp Val Lys
145     150     155     160
Glu Ala Asp Pro Thr Gly His Ser Tyr Val Leu Val Thr Cys Leu Gly
165     170     175
Leu Ser Tyr Asp Gly Leu Leu Gly Asp Asn Gln Ile Met Pro Lys Thr
180     185     190
Gly Phe Leu Ile Ile Val Leu Val Met Ile Ala Met Glu Gly Gly His
195     200     205
Ala Pro Glu Glu Glu Ile Trp Glu Glu Leu Ser Val Met Glu Val Tyr
210     215     220
Asp Gly Arg Glu His Ser Ala Tyr Gly Glu Pro Arg Lys Leu Leu Thr
225     230     235     240
Gln Asp Leu Val Gln Glu Lys Tyr Leu Glu Tyr Arg Gln Val Pro Asp
245     250     255
Ser Asp Pro Ala Arg Tyr Glu Phe Leu Trp Gly Pro Arg Ala Leu Ala
260     265     270
Glu Thr Ser Tyr Val Lys Val Leu Glu Tyr Val Ile Lys Val Ser Ala
275     280     285
Arg Val Arg Phe Phe Phe Pro Ser Leu Arg Glu Ala Ala Leu Arg Glu
290     295     300

```

Glu Glu Glu Gly Val
305

<210> 3
<211> 16
<212> PRT
<213> Homo sapiens

<400> 3
Val Lys Val Leu Glu Tyr Val Ile Lys Val Ser Ala Arg Val Arg Phe
1 5 10 15

<210> 4
<211> 16
<212> PRT
<213> Homo sapiens

<400> 4
Glu Tyr Val Ile Lys Val Ser Ala Arg Val Arg Phe Phe Phe Pro Ser
1 5 10 15

<210> 5
<211> 12
<212> PRT
<213> Homo sapiens

<400> 5
Glu Thr Ser Tyr Val Lys Val Leu Glu Tyr Val Ile
1 5 10

<210> 6
<211> 12
<212> PRT
<213> Homo sapiens

<400> 6
Val Lys Val Leu Glu Tyr Val Ile Lys Val Ser Ala
1 5 10

<210> 7
<211> 12
<212> PRT
<213> Homo sapiens

<400> 7
Glu Tyr Val Ile Lys Val Ser Ala Arg Val Arg Phe
1 5 10

<210> 8
<211> 12
<212> PRT
<213> Homo sapiens

<400> 8
Lys Val Ser Ala Arg Val Arg Phe Phe Phe Pro Ser
1 5 10

<210> 9
<211> 12
<212> PRT
<213> Homo sapiens

<400> 9
Arg Val Arg Phe Phe Phe Pro Ser Leu Arg Glu Ala
1 5 10

<210> 10
<211> 12
<212> PRT
<213> Homo sapiens

<400> 10
Phe Phe Pro Ser Leu Arg Glu Ala Ala Leu Arg Glu
1 5 10

<210> 11
<211> 13
<212> PRT
<213> Homo sapiens

<400> 11
Leu Arg Glu Ala Ala Leu Arg Glu Glu Glu Glu Gly Val
1 5 10

<210> 12
<211> 36
<212> DNA
<213> Homo sapiens

<400> 12
gagtatgtga tcaaggtcag tgcaagagtt cgcttt

36

<210> 13
<211> 16
<212> PRT
<213> Homo sapiens

<400> 13
Tyr Val Lys Val Leu Glu His Val Val Arg Val Asn Ala Arg Val Arg
1 5 10 15

<210> 14
<211> 16
<212> PRT
<213> Homo sapiens

<400> 14
Leu Glu His Val Val Arg Val Asn Ala Arg Val Arg Ile Ala Tyr Pro
1 5 10 15

<210> 15
<211> 9
<212> PRT
<213> Homo sapiens

<400> 15
Glu Ala Asp Pro Thr Gly His Ser Tyr
1 5

<210> 16
<211> 9
<212> PRT
<213> Homo sapiens

<400> 16
Ser Leu Phe Arg Ala Val Ile Thr Lys
1 5

<210> 17
<211> 9
<212> PRT
<213> Homo sapiens

<400> 17
Asn Tyr Lys His Cys Phe Pro Glu Ile
1 5

<210> 18
<211> 10
<212> PRT
<213> Homo sapiens

<400> 18
Glu Val Tyr Asp Gly Arg Glu His Ser Ala
1 5 10

<210> 19
<211> 10
<212> PRT
<213> Homo sapiens

<400> 19
Arg Glu Pro Val Thr Lys Ala Glu Met Leu
1 5 10

<210> 20
<211> 9
<212> PRT
<213> Homo sapiens

<400> 20
Asp Pro Ala Arg Tyr Glu Phe Leu Trp
1 5

<210> 21
<211> 9
<212> PRT
<213> Homo sapiens

<400> 21
Ser Ala Phe Pro Thr Thr Ile Asn Phe
1 5

<210> 22
<211> 9
<212> PRT
<213> Homo sapiens

<400> 22
Ser Ala Tyr Gly Glu Pro Arg Lys Leu
1 5

<210> 23
<211> 14
<212> PRT
<213> Homo sapiens

<400> 23
Leu Leu Lys Tyr Arg Ala Arg Glu Pro Val Thr Lys Ala Glu
1 5 10

<210> 24
<211> 10
<212> PRT
<213> Homo sapiens

<400> 24
Tyr Leu Gln Leu Val Phe Gly Ile Glu Val
1 5 10

<210> 25
<211> 9
<212> PRT
<213> Homo sapiens

<400> 25
Glu Val Asp Pro Ile Gly His Leu Tyr
1 5

<210> 26
<211> 9
<212> PRT
<213> Homo sapiens

<400> 26
Phe Leu Trp Gly Pro Arg Ala Leu Val
1 5

<210> 27
<211> 9
<212> PRT
<213> Homo sapiens

<400> 27
Lys Val Ala Glu Leu Val His Phe Leu
1 5

<210> 28
<211> 9
<212> PRT
<213> Homo sapiens

<400> 28
Ile Met Pro Lys Ala Gly Leu Leu Ile
1 5

<210> 29
<211> 9
<212> PRT
<213> Homo sapiens

<400> 29
Thr Phe Pro Asp Leu Glu Ser Glu Phe
1 5

<210> 30
<211> 10
<212> PRT
<213> Homo sapiens

<400> 30
Met Glu Val Asp Pro Ile Gly His Leu Tyr
1 5 10

<210> 31
<211> 14
<212> PRT
<213> Homo sapiens

<400> 31
Ala Glu Leu Val His Phe Leu Leu Leu Lys Tyr Arg Ala Arg
1 5 10

<210> 32
<211> 15
<212> PRT
<213> Homo sapiens

<400> 32
Thr Ser Tyr Val Lys Val Leu His His Met Val Lys Ile Ser Gly
1 5 10 15

<210> 33
<211> 10
<212> PRT
<213> Homo sapiens

<400> 33
Gly Val Tyr Asp Gly Arg Glu His Thr Val
1 5 10

<210> 34
<211> 9
<212> PRT
<213> Homo sapiens

<400> 34
Met Val Lys Ile Ser Gly Gly Pro Arg
1 5

<210> 35
<211> 12
<212> PRT
<213> Homo sapiens

<400> 35
Lys Ile Ser Gly Gly Pro Arg Ile Ser Tyr Pro Leu
1 5 10

<210> 36
<211> 9
<212> PRT
<213> Homo sapiens

<400> 36
Gly Leu Tyr Asp Gly Met Glu His Leu
1 5

<210> 37
<211> 9
<212> PRT
<213> Homo sapiens

<400> 37
Ala Ala Arg Ala Val Phe Leu Ala Leu
1 5

<210> 38
<211> 8
<212> PRT
<213> Homo sapiens

<400> 38
Tyr Arg Pro Arg Pro Arg Arg Tyr
1 5

<210> 39
<211> 9
<212> PRT
<213> Homo sapiens

<400> 39
Tyr Tyr Trp Pro Arg Pro Arg Arg Tyr
1 5

<210> 40
<211> 11
<212> PRT
<213> Homo sapiens

<400> 40
Gln Leu Ser Leu Leu Met Trp Ile Thr Gln Cys
1 5 10

<210> 41
<211> 11
<212> PRT
<213> Homo sapiens

<400> 41
Ser Leu Leu Met Trp Ile Thr Gln Cys Phe Leu
1 5 10

<210> 42
<211> 9
<212> PRT
<213> Homo sapiens

<400> 42
Ser Leu Leu Met Trp Ile Thr Gln Cys
1 5

<210> 43
<211> 9
<212> PRT
<213> Homo sapiens

<400> 43
Gln Leu Ser Leu Leu Met Trp Ile Thr
1 5

<210> 44
<211> 10
<212> PRT
<213> Homo sapiens

<400> 44
Ala Ser Gly Pro Gly Gly Gly Ala Pro Arg
1 5 10

<210> 45
<211> 10
<212> PRT
<213> Homo sapiens

<400> 45
Leu Ala Ala Gln Glu Arg Arg Val Pro Arg
1 5 10

<210> 46
<211> 9
<212> PRT
<213> Homo sapiens

<400> 46
Val Leu Pro Asp Val Phe Ile Arg Cys
1 5

<210> 47
<211> 10
<212> PRT
<213> Homo sapiens

<400> 47
Val Leu Pro Asp Val Phe Ile Arg Cys Val
1 5 10

<210> 48
<211> 10
<212> PRT
<213> Homo sapiens

<400> 48
Glu Val Ile Ser Cys Lys Leu Ile Lys Arg
1 5 10

<210> 49
<211> 10
<212> PRT
<213> Homo sapiens

<400> 49
Ser Pro Ser Ser Asn Arg Ile Arg Asn Thr
1 5 10

<210> 50
<211> 9
<212> PRT
<213> Homo sapiens

<400> 50
Glu Glu Lys Leu Ile Val Val Leu Phe
1 5

<210> 51
<211> 9
<212> PRT
<213> Homo sapiens

<400> 51
Glu Glu Lys Leu Ser Val Val Leu Phe
1 5

<210> 52
<211> 10
<212> PRT
<213> Homo sapiens

<400> 52
Ala Cys Asp Pro His Ser Gly His Phe Val
1 5 10

<210> 53
<211> 10
<212> PRT
<213> Homo sapiens

<400> 53
Ala Arg Asp Pro His Ser Gly His Phe Val
1 5 10

<210> 54
<211> 9
<212> PRT
<213> Homo sapiens

<400> 54
Ser Tyr Leu Asp Ser Gly Ile His Phe
1 5

<210> 55
<211> 9
<212> PRT
<213> Homo sapiens

<400> 55
Ser Tyr Leu Asp Ser Gly Ile His Ser
1 5

<210> 56
<211> 9
<212> PRT
<213> Homo sapiens

<400> 56
Met Leu Leu Ala Val Leu Tyr Cys Leu
1 5

<210> 57
<211> 9
<212> PRT
<213> Homo sapiens

<400> 57
Tyr Met Asn Gly Thr Met Ser Gln Val
1 5

<210> 58
<211> 9
<212> PRT
<213> Homo sapiens

<400> 58
Tyr Met Asp Gly Thr Met Ser Gln Val
1 5

<210> 59
<211> 9
<212> PRT
<213> Homo sapiens

<400> 59
Ala Phe Leu Pro Trp His Arg Leu Phe
1 5

<210> 60
<211> 9
<212> PRT
<213> Homo sapiens

<400> 60
Ser Glu Ile Trp Arg Asp Ile Asp Phe
1 5

<210> 61
<211> 9
<212> PRT
<213> Homo sapiens

<400> 61
Tyr Glu Ile Trp Arg Asp Ile Asp Phe
1 5

<210> 62
<211> 15
<212> PRT
<213> Homo sapiens

<400> 62
Gln Asn Ile Leu Leu Ser Asn Ala Pro Leu Gly Pro Gln Phe Pro
1 5 10 15

<210> 63
<211> 15
<212> PRT
<213> Homo sapiens

<400> 63
Asp Tyr Ser Tyr Leu Gln Asp Ser Asp Pro Asp Ser Phe Gln Asp
1 5 10 15

<210> 64
<211> 9
<212> PRT
<213> Homo sapiens

<400> 64
Ala Ala Gly Ile Gly Ile Leu Thr Val
1 5

<210> 65
<211> 10
<212> PRT
<213> Homo sapiens

<400> 65
Glu Ala Ala Gly Ile Gly Ile Leu Thr Val
1 5 10

<210> 66
<211> 9
<212> PRT
<213> Homo sapiens

<400> 66
Ile Leu Thr Val Ile Leu Gly Val Leu
1 5

<210> 67
<211> 9
<212> PRT
<213> Homo sapiens

<400> 67
Lys Thr Trp Gly Gln Tyr Trp Gln Val
1 5

<210> 68
<211> 9
<212> PRT
<213> Homo sapiens

<400> 68
Ile Thr Asp Gln Val Pro Phe Ser Val
1 5

<210> 69
<211> 9
<212> PRT
<213> Homo sapiens

<400> 69
Tyr Leu Glu Pro Gly Pro Val Thr Ala
1 5

<210> 70
<211> 10
<212> PRT
<213> Homo sapiens

<400> 70
Leu Leu Asp Gly Thr Ala Thr Leu Arg Leu
1 5 10

<210> 71
<211> 10
<212> PRT
<213> Homo sapiens

<400> 71
Val Leu Tyr Arg Tyr Gly Ser Phe Ser Val
1 5 10

<210> 72
<211> 9
<212> PRT
<213> Homo sapiens

<400> 72
Leu Tyr Val Asp Ser Leu Phe Phe Leu
1 5

<210> 73
<211> 7
<212> PRT
<213> Homo sapiens

<400> 73
His His His His His His His
1 5